Claim 18, line 1: change "1" to -- 8 --.

REMARKS

As indicated, supra, the amendments presented herein are directed to the final rejection and the advisory action. All amendments made in the amendment under 37 CFR § 1.116 of December 15 are again presented.

The amendment to page 9 is proper. Serial No. 08/938,334 was incorporated by reference. It has issued as U.S. Patent No. 5,405,940. A copy is attached, for convenience. Note the front page, with MAGE-1 and SEQ ID NO: 1. This sequence is identical to amino acids 4-12 of SEQ ID NO: 4, presented herein. Attention is drawn to column 5, line 60 - column 6, line 40, e.g. Also, note the claims wherein SEQ ID NO: 1 was excluded because it was disclosed earlier, i.e., in the PCT application which is of record in this case. This peptide corresponds to amino acids 4-12 of SEQ ID NO: 4, as any comparison will show. Hence, there is support for the amendment.

MAGE 1 protein is the subject of the invention. Compare claim 8 to, e.g., page 19 of the specification. The art recognized that MAGE-1 is a tumor rejection antigen precursor, and that one tumor rejection antigen derived therefrom consists of amino acids 4-12 of SEQ ID NO: 1. Hence, the amendment is proper, and should be entered.

No new search issues are raised by this amendment. The Examiner specifically referred to the claimed subject matter as

"the claimed MAGE-1 antigen" (see final rejection, page 3). As indicated, supra, at least the '940 patent disclosed a tumor rejection antigen derived from MAGE-1. In view of the proper specification amendment, the claim amendment does not present new matter, nor does it raise any new issues.

Applicants incorporate all arguments made previously, and now address the points raised in the advisory action.

The Examiner states that the claims are not enabled because

> "(T)he specification fails to provide guidance of what regions are associated with the activity and functions of the protein, and lack of predictability associated with regard to producing and using the myriad or derivatives encompassed in the scope of the claims, one skilled in the art would be forced into undue experimentation in order to practice broadly the claimed invention."

Applicants will address the second portion of this argument infra. As for the first portion, as indicated, supra, the MAGE-1 molecule is processed to at least one tuor rejection antigen, as is defined by the claims.

With respect to the Examiner's dismissal of the precedent of Ex parte Anderson, the decision stated that a single variation does not normally change activity unless it is in a critical region of the protein. As has been pointed out in the specification, a tumor rejection antigen precursor - and MAGE-1 is a tumor rejection antigen precursor - is processed to at least one TRA. Not only does the specification so state, so do the materials incorporated by reference. What is lacking is a showing, by the Examiner, of

a critical region where alterations would change the activity of a tumor rejection antigen precursor. The two papers relied upon by the Examiner, as has been pointed out previously, relate to growth factors. No correlation has been made between tumor rejection antigen precursors, and growth factors. Nor has there been a showing that fGF or TGFα are processed to smaller molecules which are presented by HLA molecules. It is noted that fGF and TGFα are proteins; however there is no other discernable relationship to TRAPs and TRAs. In view of the amendment to the specification and to claim 8, the rejection should be withdrawn.

Turning to the rejection of claim 20, it is pointed out that claim 20 is a dependent claim. It depends from claim 1. Hence, the subject matter of claim 20 must have a molecular weight of either about 34.3 kilodaltons as a glycoprotein. Using the smaller molecular weight (34.3 kd), it is manifestly impossible for a 40 amino acid protein to have a wight of 34.3 kilodaltons. Hence, the Examiner's interpretation of claim 20 is strained to the point where it is an impossible interpretation of the claim. Each amino acid would have to weight about 850 daltons under the Examiner's interpretation of the claims. This is manifestly not possible. To the contrary, the specification clearly and unequivocably supports dependent claim 20, as the examples clearly show that the recited oligopeptides came from a MAGE-1 molecule. There is clear written support for this claim. The rejection should be withdrawn.

Reconsideration of the application, withdrawal of the rejections, and allowance of all pending claims is believed proper and is urged.

Respectfully submitted,

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